Bullet with Bundled Removable Bracket

Mounting on a Corner using the Accessory Set

Installation Guide

For Models:

D3x / D4x / E3x
E41 / E42 / E43 / E41A / E42A / E43A

2013/12/06

ACTi
Connecting Vision

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Installation Procedures

The camera can be installed onto a corner using additional mounting accessories. The accessories can be purchased individually or as an accessory set.

Mounting Solution	Required Accessories
Corner Mount with Mounting Bracket (SMAX-0005)	PMAX-0402 PMAX-1103

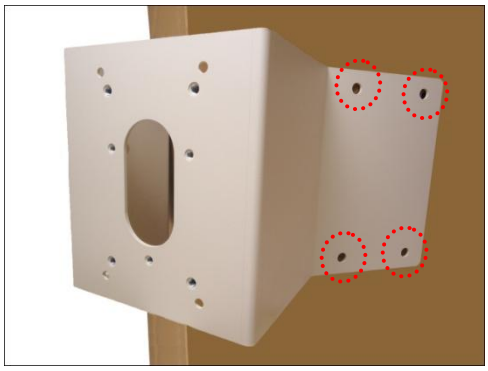
The installation steps vary depending on the preferred waterproof cabling solution. There are 3 ways to do the cabling:

- ***Installation Using the Corner Mount with Bracket and Sealant Tape***, see page 5.
- ***Installation Using the Corner Mount with Bracket and Flex Conduit*** (Not applicable for D3x Series), see page 10.
- ***Installation Using the Corner Mount with Bracket and Naked Cable*** (Not applicable for D3x Series), see page 20.

Installation Using the Corner Mount with Bracket and Sealant Tape

Step 1: Install the Corner Mount

1. Align the Corner Mount to the corner wall and mark the location of the eight (8) screw holes.



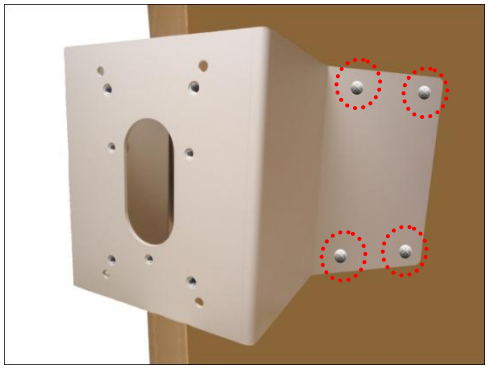
NOTE:

- The illustration above shows only the screw holes on one side of the wall. Remember to mark the screw holes on the other side of the wall, too.
- Due to different corner surfaces and shapes, it is recommended to use the actual Corner Mount to mark the holes for drilling.

2. Drill the eight (8) screw holes.

3. Attach eight (8) screws (not included in the package) to secure the Corner Mount to the wall.

NOTE: Purchase screws applicable to the wall type you are mounting the Corner Mount to.



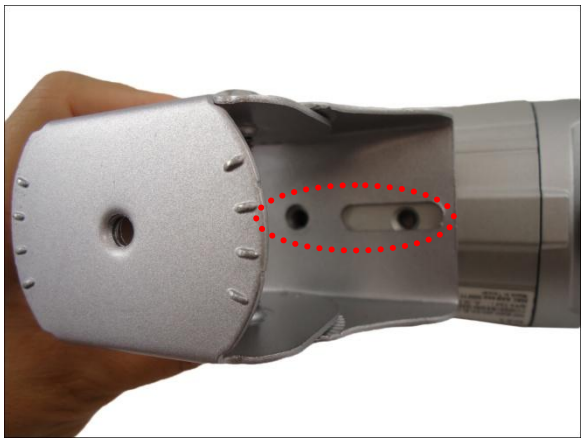
Step 2: Install the Bracket

1. Remove the screw to detach the camera holder from the bracket. Set the holder aside for later use.

2. Attach the bracket to the corner mount using the three (3) screws supplied in the corner mount kit.

Step 3: Install the Camera

1. Align the screw holes of the holder to the bottom screw holes of the camera.

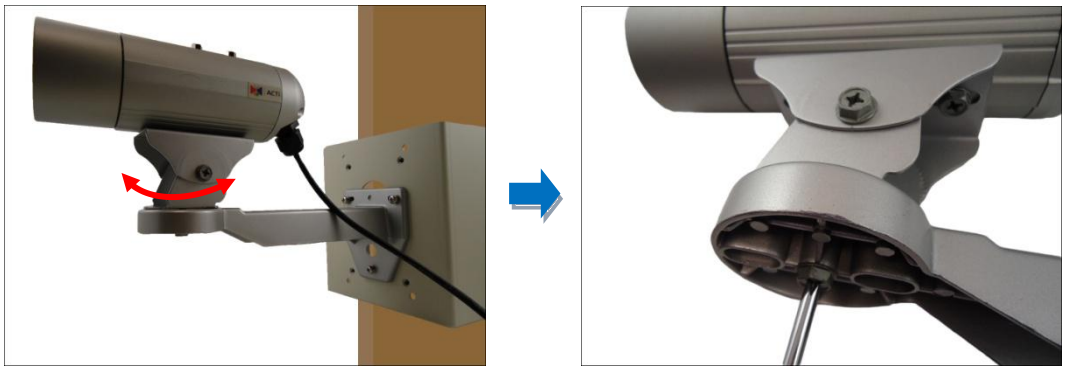


2. Attach the two (2) screws (supplied in the heavy duty bracket package) to secure the camera to the holder.

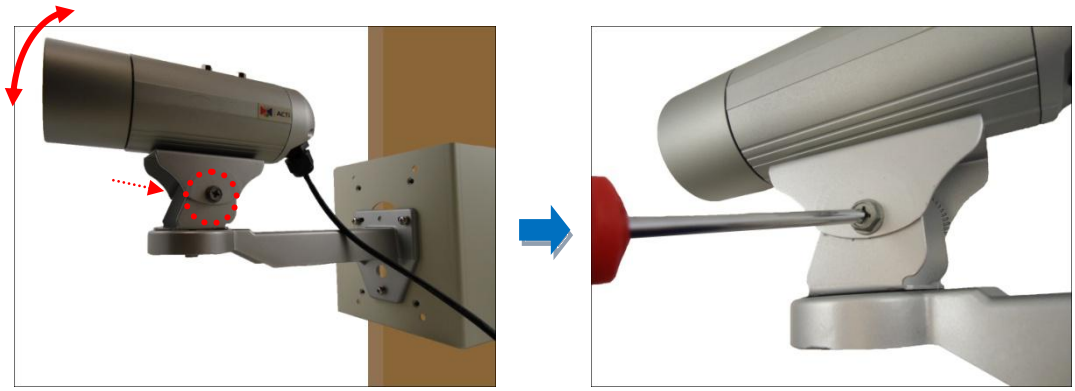
3. Align the screw hole of the holder to the heavy duty bracket.

4. Loosely attach the screw to secure the holder to the bracket.

5. As needed, turn the holder left or right to adjust the camera viewing direction. Then, secure the screw tightly to fix the position.

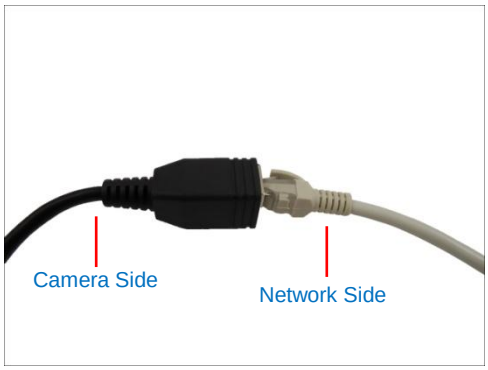


6. As needed, loosen the two (2) side screws of the holder and then move the camera up or down to adjust the camera viewing angle. Then, tighten the two (2) side screws to fix the position.



Step 4: Connect the Cables

1. Connect the Ethernet cable from the network side to the Ethernet port of the camera to complete the installation.



NOTES on using Ethernet cables: For outdoor installations, it is recommended to use *exterior-grade* Ethernet cables (CAT5/CAT5e/CAT6); ordinary Ethernet cables are only designed for indoor use and may deteriorate quickly when exposed to outdoor elements. Exterior-grade Ethernet cables are waterproof and do not require a conduit.

2. If the camera will be installed outdoors, waterproof the cable connection by wrapping it using a moisture-sealant tape, such as **3M PRODUCTS Core Series 4-1000** (not included in the package) or equivalent. See example below.

Step 5: Access the Camera Live View

See ***How to Access the Camera Live View*** on page 28 for more information.

Step 6: Adjust the Viewing Angle and Focus

Based on the Live View, adjust the viewing angle and focus of the camera. Adjustments vary per model; for detailed information, please refer to the following sections:

- For D3x / E3x camera series, see ***D3x / E3x Series*** on page 36.
- For D4x / E41 / E41A / E42 / E42A / E43 / E43A series, see ***D4x / E41 / E41A / E42 / E42A / E43 / E43A Series*** on page 38.

Step 7: Attach the Sunshield

See ***How to Attach the Sunshield*** on page 39 for more information.

Installation Using the Corner Mount with Bracket and Flex Conduit

The D4x, E3x, E41, E41A, E42, E42A, E43, E43A camera series come with a bundled conduit gland. Use the conduit gland with a **1/2"**-size flex conduit (not included in the package) to protect the Ethernet cable against fierce weather conditions. To use conduit with the camera, the pre-installed network cable with "pigtail" (female connector) must be replaced with a standard Ethernet cable.

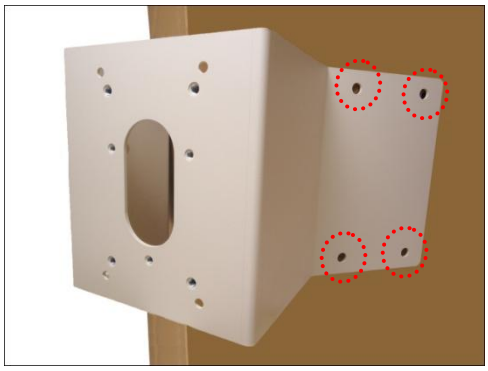
NOTE: The flex conduit and Ethernet cable are not included in the package and must be sold separately. When purchasing, make sure the flex conduit size is 1/2" to match the bundled conduit gland.

To do the waterproof cable installation, also prepare the following tools:

- Screwdriver
- Pliers

Step 1: Install the Corner Mount

1. Align the Corner Mount to the corner wall and mark the location of the eight (8) screw holes.



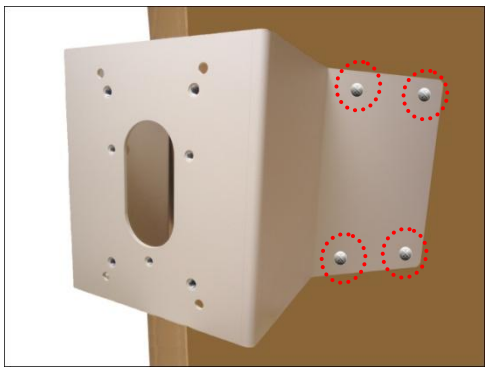
NOTE:

- The illustration above shows only the screw holes on one side of the wall. Remember to mark the screw holes on the other side of the wall, too.
- Due to different corner surfaces and shapes, it is recommended to use the actual Corner Mount to mark the holes for drilling.

2. Drill the eight (8) screw holes.

3. Attach eight (8) screws (not included in the package) to secure the Corner Mount to the wall.

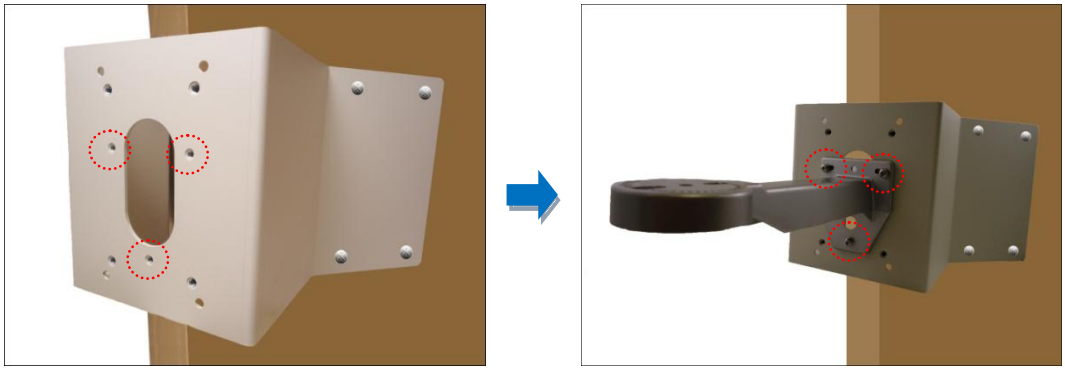
NOTE: Purchase screws applicable to the wall type you are mounting the Corner Mount to.



Step 2: Install the Bracket

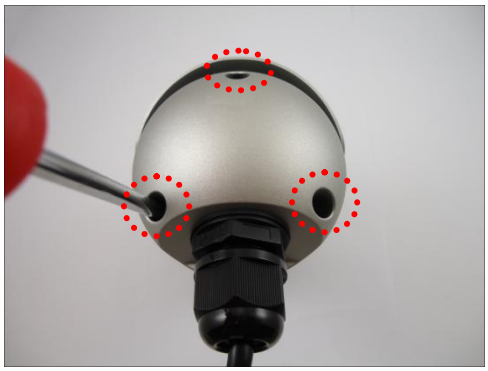
1. Remove the screw to detach the camera holder from the bracket. Set the holder aside for later use.

2. Attach the bracket to the corner mount using the three (3) screws supplied in the corner mount kit.



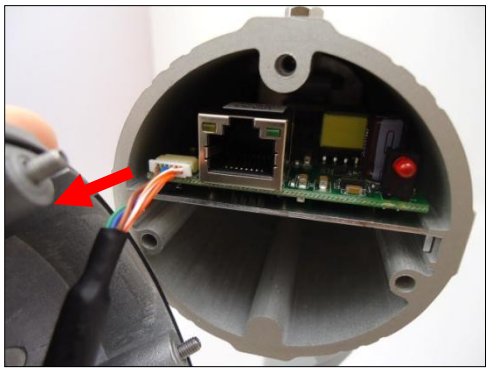
Step 3: Remove the Pre-installed Network Cable (“Pigtail”)

1. Loosen the three (3) screws to detach the back cover.



NOTE: A cable is connected inside the camera; do not abruptly pull the back cover.

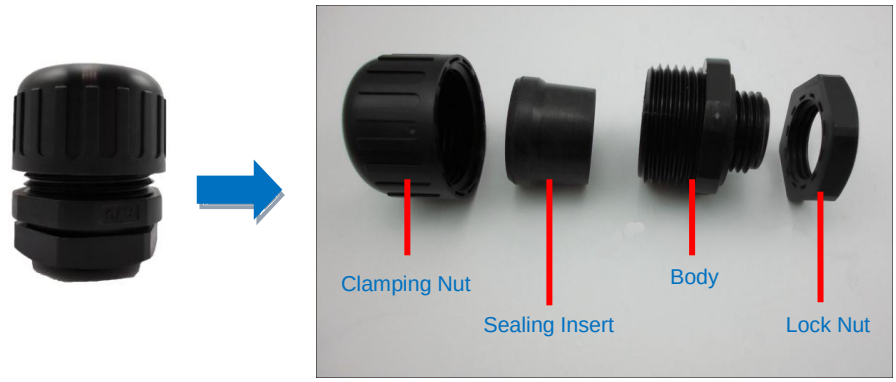
2. Disconnect the network connector.



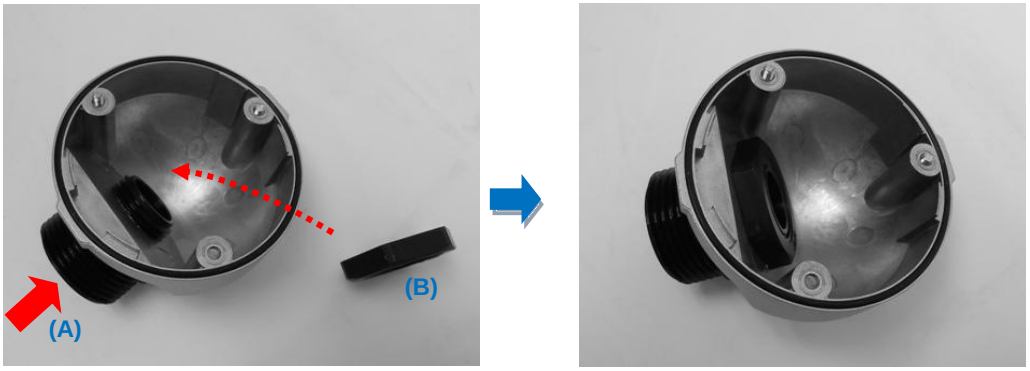
3. Remove the pre-installed cable gland and network cable using pliers (not included in the package).

Step 4: Prepare the Conduit Gland and Flex Conduit

1. Disassemble the bundled conduit gland as shown below.

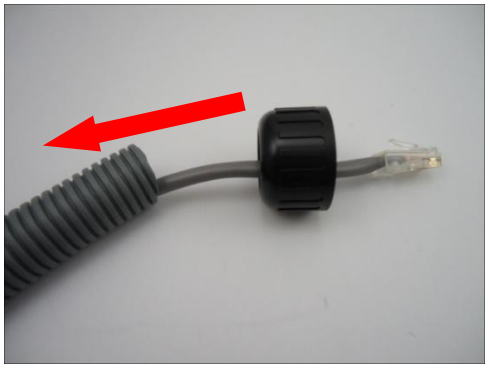


2. Insert the body (A) to the back cover and secure it with the lock nut (B).

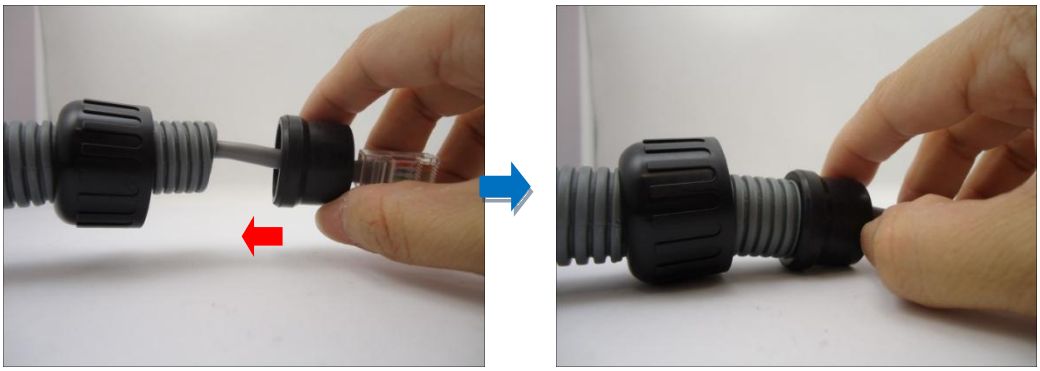


3. From the network side, pull the Ethernet cable through the flex conduit.

4. Insert the clamping nut through the flex conduit.

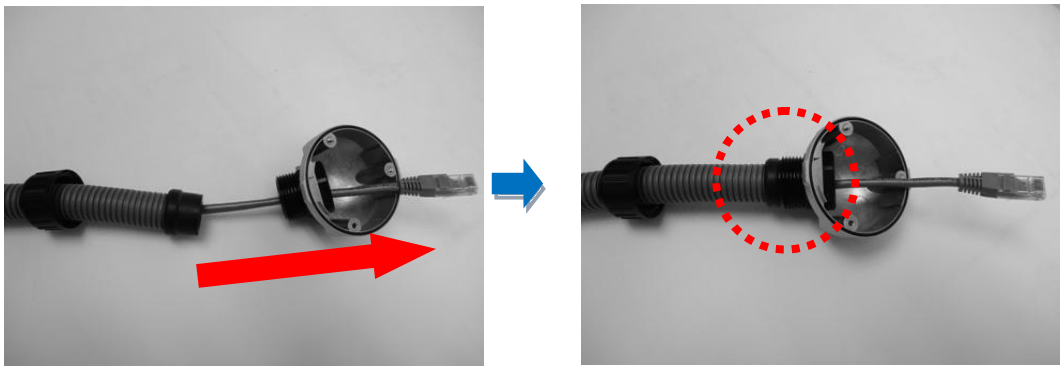


5. Insert the sealing insert and attach it at the end of the flex conduit.



Step 5: Install the Ethernet Cable

1. Insert the Ethernet cable through the back cover and then align the sealing insert to the gland body.



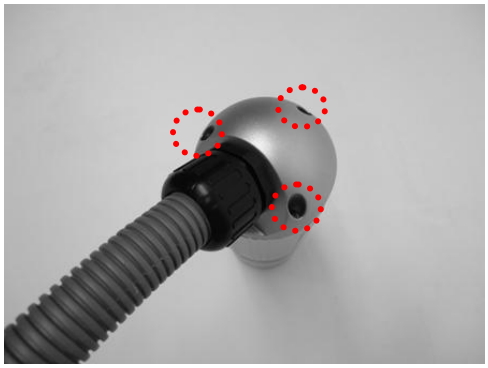
2. Secure the clamping nut to the body.

NOTE: Make sure the clamping nut is tight to avoid possible water leak.

Step 6: Connect the Ethernet Cable

1. Connect the Ethernet cable to the Ethernet port inside the camera.

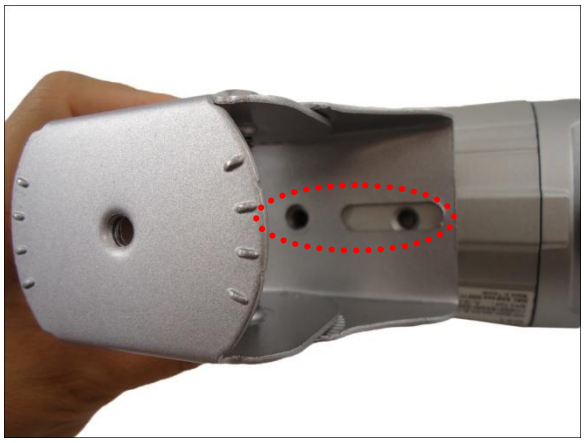
2. When done, close the back cover by tightening the three (3) screws.



NOTE: Make sure the rubber ring on the cover is secured and the screws are completely tightened to avoid possible water leak.

Step 7: Install the Camera

1. Align the screw holes of the holder to the bottom screw holes of the camera.

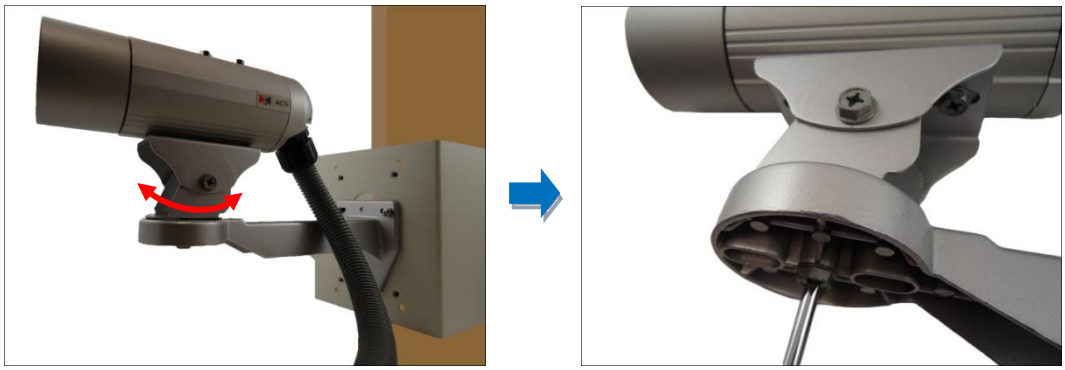


2. Attach the two (2) screws (supplied in the heavy duty bracket package) to secure the camera to the holder.

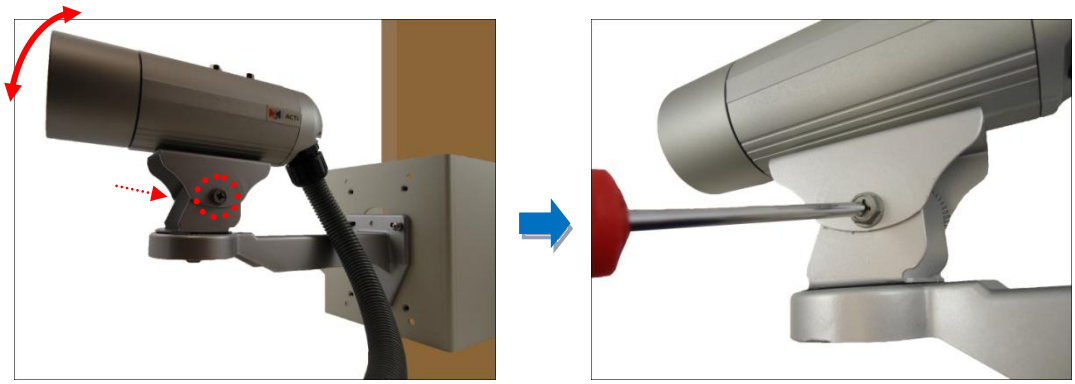
3. Align the screw hole of the holder to the heavy duty bracket.

4. Loosely attach the screw to secure the holder to the bracket.

5. As needed, turn the holder left or right to adjust the camera viewing direction. Then, secure the screw tightly to fix the position.



6. As needed, loosen the two (2) side screws of the holder and then move the camera up or down to adjust the camera viewing angle. Then, tighten the two (2) side screws to fix the position.



Step 8: Connect the Camera to the Network

Connect the other end of the Ethernet cable to a PoE switch.

Step 9: Access the Camera Live View

See ***How to Access the Camera Live View*** on page 28 for more information.

Step 10: Adjust the Viewing Angle and Focus

Based on the Live View, adjust the viewing angle and focus of the camera. Adjustments vary per model; for detailed information, please refer to the following sections:

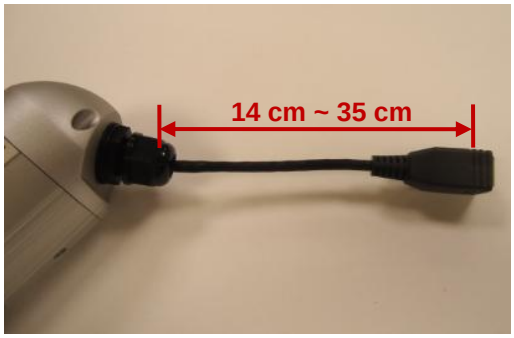
- For D3x / E3x camera series, see ***D3x / E3x Series*** on page 36.
- For D4x / E41 / E41A / E42 / E42A / E43 / E43A series, see ***D4x / E41 / E41A / E42 / E42A / E43 / E43A Series*** on page 38.

Step 11: Attach the Sunshield

See ***How to Attach the Sunshield*** on page 39 for more information.

Installation Using the Corner Mount with Bracket and Naked Cable

The pre-installed network cable comes with an Ethernet port (female connector), or known as a “pigtail”. The length of the cable is around 14 ~ 35 cm (varies by model). The network cable and gland are resistant to salt water, weak acid, alcohol, oil, grease and common solvents.



In case the installation environment requires a change of this network cable, such as the use of an Ethernet cable with male connector, it is recommended to use *exterior-grade* Ethernet cables (CAT5/CAT5e/CAT6); ordinary Ethernet cables are only designed for indoor use and may deteriorate quickly when exposed to outdoor elements. Exterior-grade Ethernet cables are waterproof and do not require a conduit.

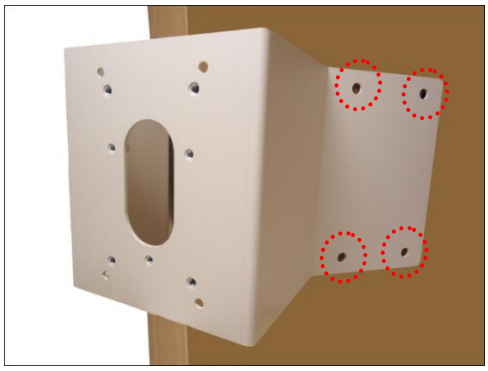
To replace the pre-installed network cable, follow the step-by-step procedures in this section and prepare the following:

- Screwdriver
- Ethernet cable without connectors
- RJ-45 Connector (x2)
- RJ45 Crimping Tool
- Pliers

NOTE: The above materials/tools are not included in the package.

Step 1: Install the Corner Mount

1. Align the Corner Mount to the corner wall and mark the location of the eight (8) screw holes.



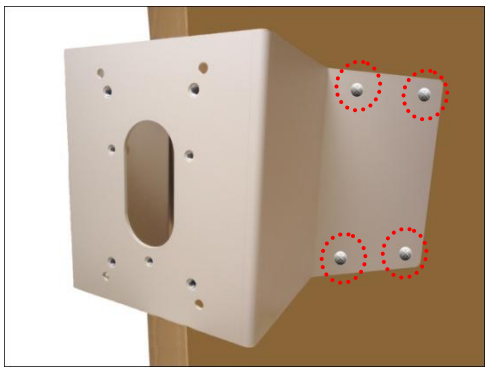
NOTE:

- The illustration above shows only the screw holes on one side of the wall. Remember to mark the screw holes on the other side of the wall, too.
- Due to different corner surfaces and shapes, it is recommended to use the actual Corner Mount to mark the holes for drilling.

2. Drill the eight (8) screw holes.

3. Attach eight (8) screws (not included in the package) to secure the Corner Mount to the wall.

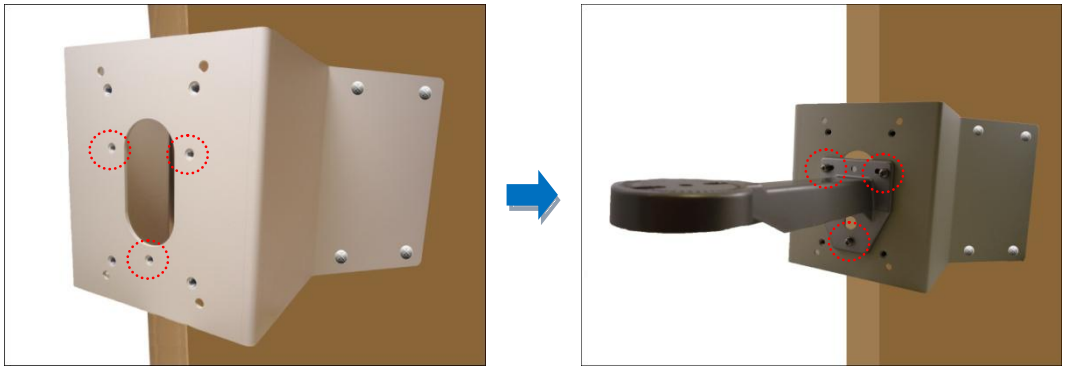
NOTE: Purchase screws applicable to the wall type you are mounting the Corner Mount to.



Step 2: Install the Bracket

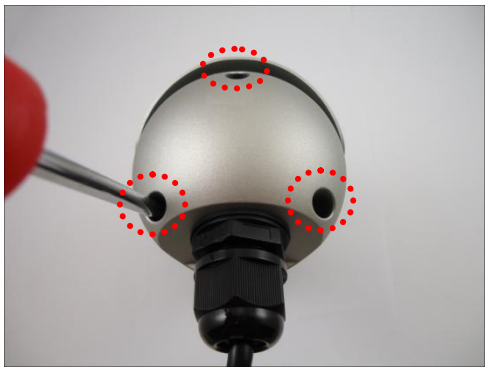
1. Remove the screw to detach the camera holder from the bracket. Set the holder aside for later use.

2. Attach the bracket to the corner mount using the three (3) screws supplied in the corner mount kit.



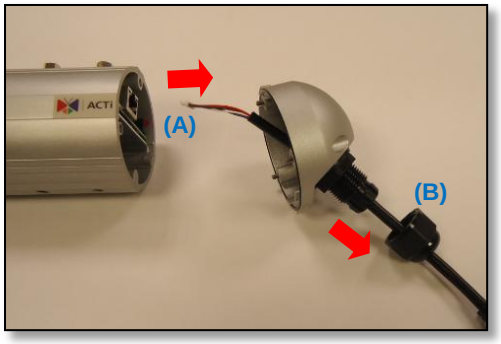
Step 3: Remove the Pre-installed Network Cable (“Pigtail”)

1. Loosen the three (3) screws to detach the back cover.

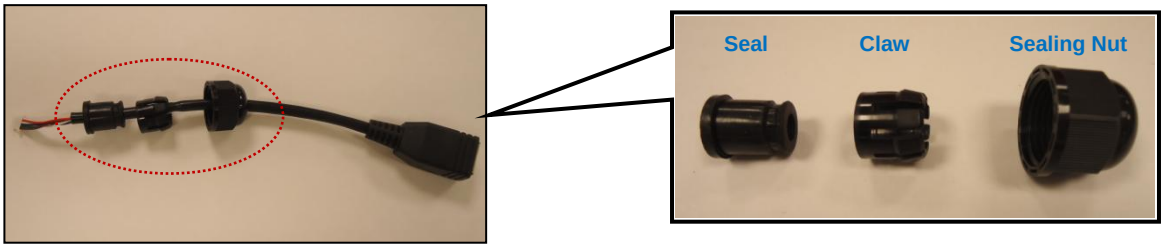


NOTE: A cable is connected inside the camera; do not abruptly pull the back cover.

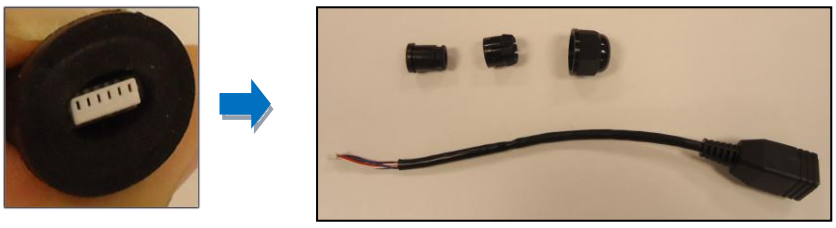
2. Disconnect the network connector (A) and remove the sealing nut (B).



3. Pull out the network cable from the back cover and disassemble the parts as marked below.



4. Squeeze the seal to pull out the connector and then completely remove the seal, claw, and sealing nut from the network cable.



Step 4: Install the New Ethernet Cable

1. Insert the new Ethernet cable through the sealing nut, claw, seal, and cable gland of the back cover.

NOTES on using Ethernet cables: If the cable will be exposed to outdoor weather conditions, it is recommended to use *exterior-grade* Ethernet cables (CAT5/CAT5e/CAT6); ordinary Ethernet cables are only designed for indoor use and may deteriorate quickly when exposed to outdoor elements. Exterior-grade Ethernet cables are waterproof and do not require a conduit.

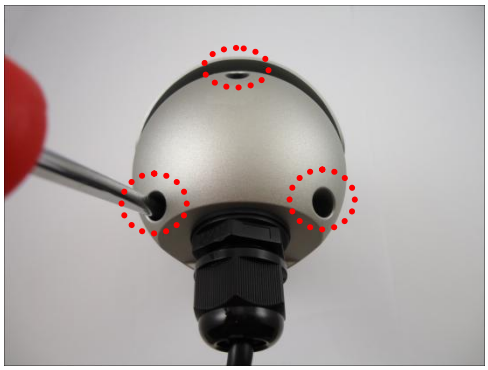
2. Attach the RJ-45 connector to the Ethernet cable. See ***How to Make an Ethernet Cable*** on page 40.

3. Connect the RJ-45 connector to the Ethernet port inside the camera, then assemble the seal and claw.

4. Tighten the sealing nut.

NOTE: Make sure the rubber seal is tightly squeezed to avoid possible water leak.

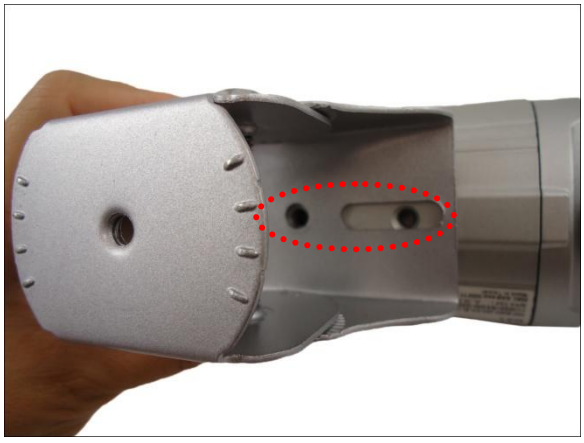
5. Attach the back cover by tightening the three (3) screws.



NOTE: Make sure the rubber ring on the cover is secured and the screws are completely tightened to avoid possible water leak.

Step 5: Install the Camera

1. Align the screw holes of the holder to the bottom screw holes of the camera.

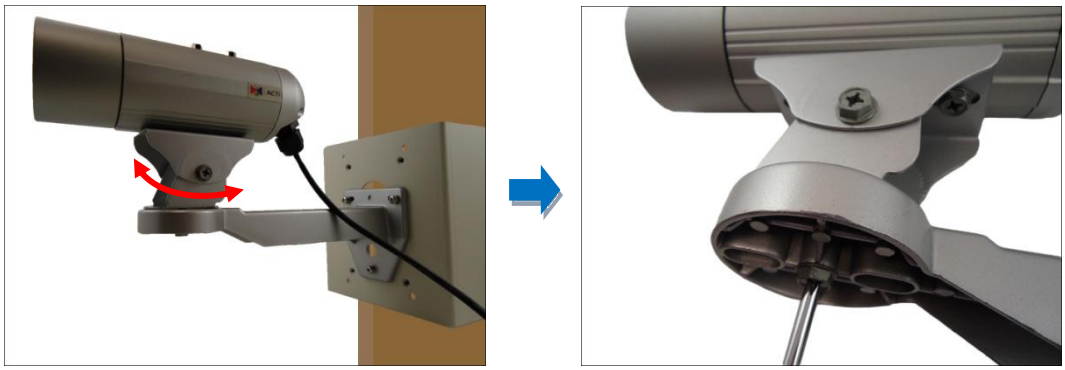


2. Attach the two (2) screws (supplied in the heavy duty bracket package) to secure the camera to the holder.

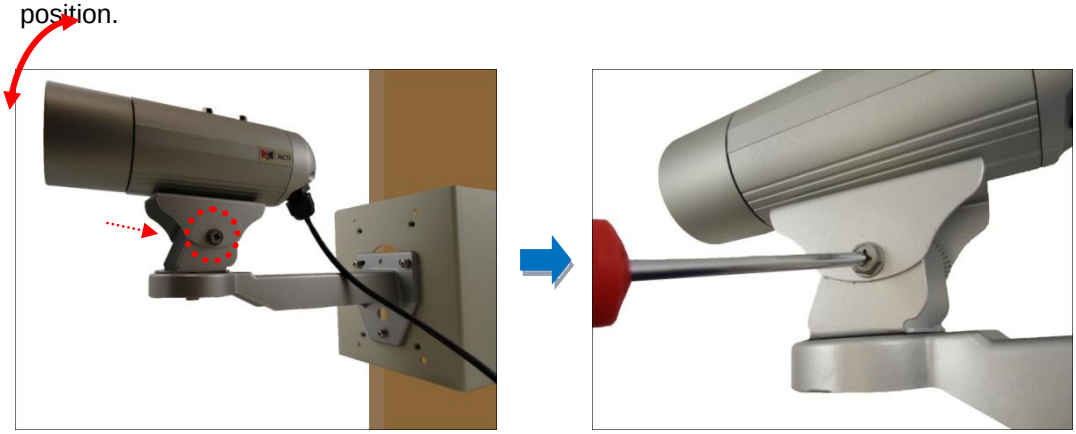
3. Align the screw hole of the holder to the heavy duty bracket.

4. Loosely attach the screw to secure the holder to the bracket.

5. As needed, turn the holder left or right to adjust the camera viewing direction. Then, secure the screw tightly to fix the position.



6. As needed, loosen the two (2) side screws of the holder and then move the camera up or down to adjust the camera viewing angle. Then, tighten the two (2) side screws to fix the position.



Step 6: Connect the Camera to the Network

Connect the other end of the Ethernet cable to a PoE switch.

Step 7: Access the Camera Live View

See ***How to Access the Camera*** Live View on page 28 for more information.

Step 8: Adjust the Viewing Angle and Focus

Based on the Live View, adjust the viewing angle and focus of the camera. Adjustments vary per model; for detailed information, please refer to the following sections:

- For D3x / E3x camera series, see ***D3x / E3x Series*** on page 36.
- For D4x / E41 / E41A / E42 / E42A / E43 / E43A series, see ***D4x / E41 / E41A / E42 / E42A / E43 / E43A Series*** on page 38.

Step 9: Attach the Sunshield

See ***How to Attach the Sunshield*** on page 39 for more information.

Appendices

How to Access the Camera Live View

Connect the Equipment

To be able to connect to the camera firmware from your PC, both the camera and the PC have to be connected to each other via Ethernet cable. At the same time, the camera has to have its own power supply. In case of PoE cameras, you can use a PoE Injector or a PoE Switch between the camera and the PC. The cameras that have the DC power connectors may be powered on by using a power adaptor.

Configure the IP Addresses

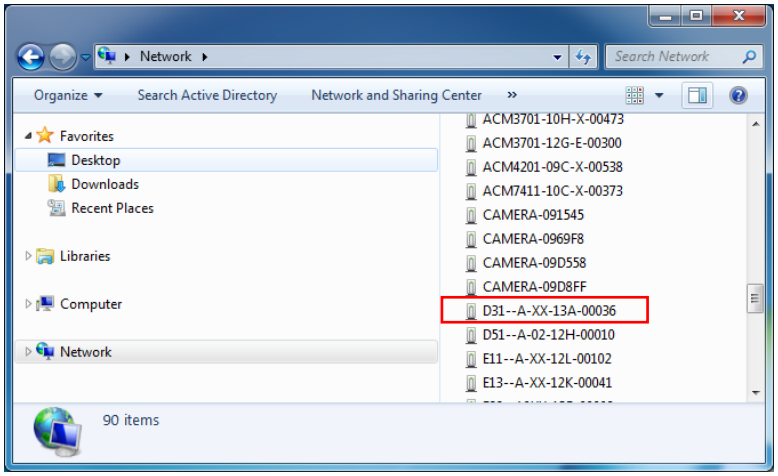
In order to be able to communicate with the camera from your PC, both the camera and the PC have to be within the same network segment. In most cases, it means that they both should have very similar IP addresses, where only the last number of the IP address is different from each other. There are 2 different approaches to IP Address management in Local Area Networks – by DHCP Server or Manually.

Using DHCP server to assign IP addresses:

If you have connected the computer and the camera into the network that has a DHCP server running, then you do not need to configure the IP addresses at all – both the camera and the PC would request a unique IP address from DHCP server automatically. In such case, the camera will immediately be ready for the access from the PC. The user, however, might not know the IP address of the camera yet. It is necessary to know the IP address of the camera in other to be able to access it by using a Web browser.

The quickest way to discover the cameras in the network is to use the simplest network search, built in the Windows system – just by pressing the “Network” icon, all the cameras of the local area network will be discovered by Windows thanks to the UPnP function support of our cameras.

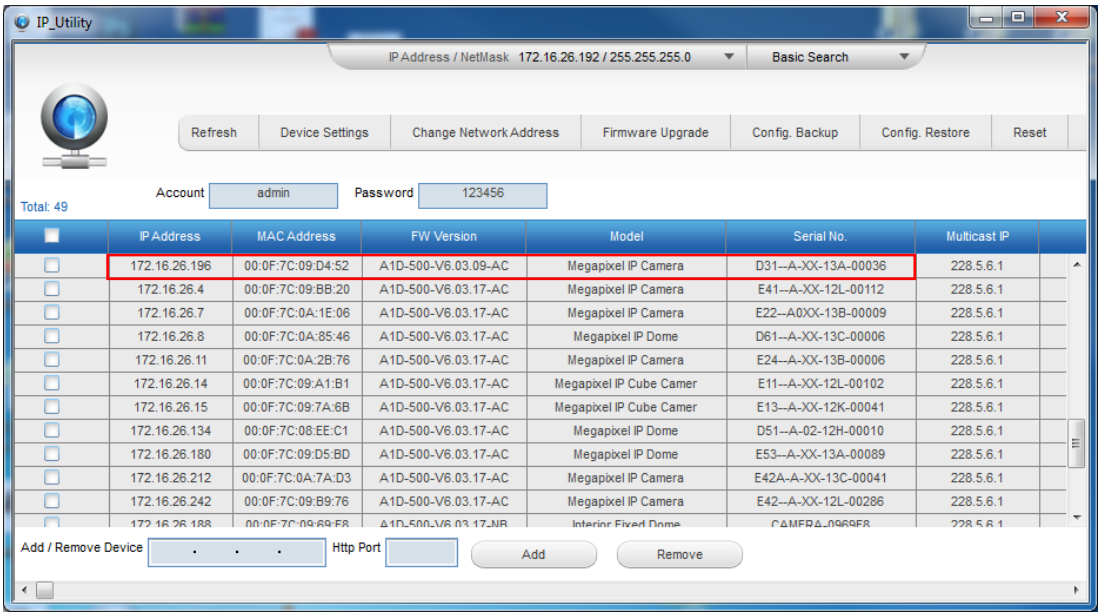
In the example below, we successfully found the camera model that we had just connected to the network.



By double-clicking with the left mouse on the camera model it is possible to automatically launch the default browser of the PC with the IP address of the target camera filled in the address bar of the browser already.

If you work with our cameras regularly, then **there is even a better way to discover the cameras in the network** – by using **IP Utility**. The IP Utility is a light software tool that can not only discover the cameras, but also list lots of valuable information, such as IP and MAC addresses, serial numbers, firmware versions, etc, and allows quick configuration of multiple devices at the same time.

The IP Utility can be downloaded for free from **http://www.acti.com/IP_Utility**
With just one click, you can launch the IP Utility and there will be an instant report as follows:


IP_Utility
IP Address / NetMask 172.16.26.192 / 255.255.255.0
Basic Search
Refresh
Device Settings
Change Network Address
Firmware Upgrade
Config. Backup
Config. Restore
Reset
Account admin
Password 123456
Total: 49
IP Address
MAC Address
FW Version
Model
Serial No.
Multicast IP
172.16.26.196 00:0F:7C:09:D4:52 A1D-500-V6.03.09-AC Megapixel IP Camera D31--A-XX-13A-00036 228.5.6.1
172.16.26.4 00:0F:7C:09:BB:20 A1D-500-V6.03.17-AC Megapixel IP Camera E41--A-XX-12L-00112 228.5.6.1
172.16.26.7 00:0F:7C:0A:1E:06 A1D-500-V6.03.17-AC Megapixel IP Camera E22--A0XX-13B-00009 228.5.6.1
172.16.26.8 00:0F:7C:0A:85:46 A1D-500-V6.03.17-AC Megapixel IP Dome D61--A-XX-13C-00006 228.5.6.1
172.16.26.11 00:0F:7C:0A:2B:76 A1D-500-V6.03.17-AC Megapixel IP Camera E24--A-XX-13B-00006 228.5.6.1
172.16.26.14 00:0F:7C:09:A1:B1 A1D-500-V6.03.17-AC Megapixel IP Cube Camer E11--A-XX-12L-00102 228.5.6.1
172.16.26.15 00:0F:7C:09:7A:6B A1D-500-V6.03.17-AC Megapixel IP Cube Camer E13--A-XX-12K-00041 228.5.6.1
172.16.26.134 00:0F:7C:08:EE:C1 A1D-500-V6.03.17-AC Megapixel IP Dome D51--A-02-12H-00010 228.5.6.1
172.16.26.180 00:0F:7C:09:D5:BD A1D-500-V6.03.17-AC Megapixel IP Dome E53--A-XX-13A-00089 228.5.6.1
172.16.26.212 00:0F:7C:0A:7A:D3 A1D-500-V6.03.17-AC Megapixel IP Camera E42A-A-XX-13C-00041 228.5.6.1
172.16.26.242 00:0F:7C:09:B9:76 A1D-500-V6.03.17-AC Megapixel IP Camera E42--A-XX-12L-00286 228.5.6.1
Add / Remove Device
Http Port
Add
Remove

You can quickly notice the camera model in the list. Click on the IP address to automatically launch the default browser of the PC with the IP address of the target camera filled in the address bar of the browser already.

Use the default camera IP address:

If there is no DHCP server in the given network, the user may have to assign the IP addresses to both PC and camera manually to make sure they are in the same network segment.

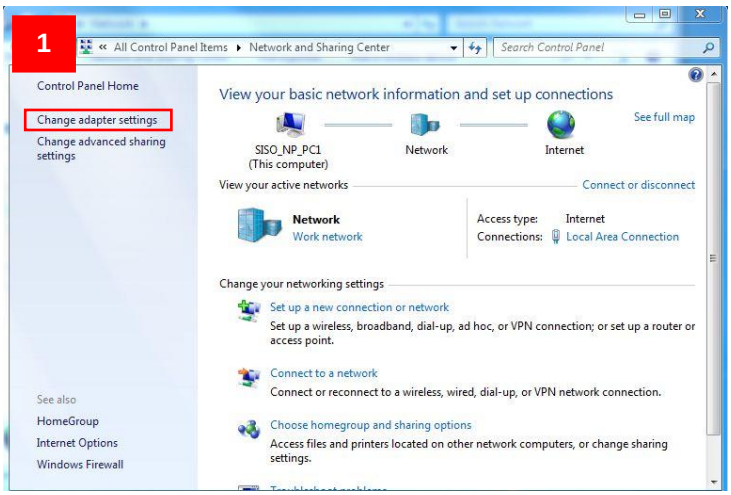
When the camera is plugged into network and it does not detect any DHCP services, it will automatically assign itself a default IP:

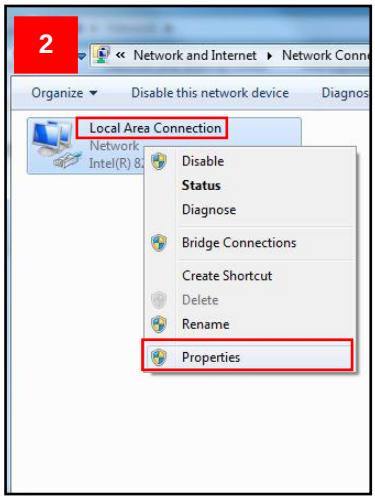
192.168.0.100

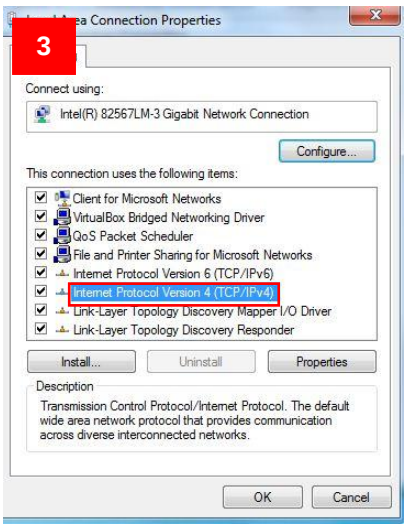
Whereas the default port number would be **80**. In order to access that camera, the IP address of the PC has to be configured to match the network segment of the camera.

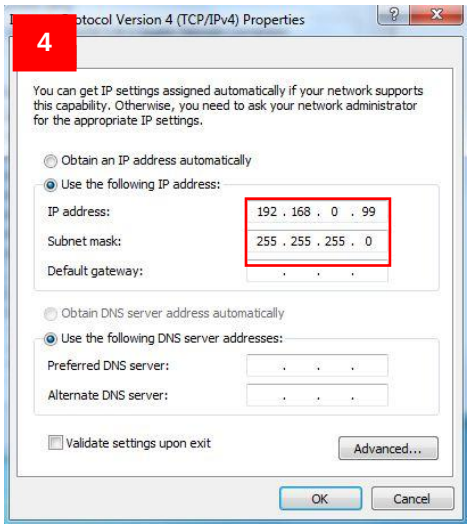
Manually adjust the IP address of the PC:

In the following example, based on Windows 7, we will configure the IP address to **192.168.0.99** and set Subnet Mask to **255.255.255.0** by using the steps below:


1
All Control Panel Items ▸ Network and Sharing Center
Search Control Panel
Control Panel Home
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
See full map
SISO_NP_PC1 (This computer)
Network
Internet
View your active networks
Connect or disconnect
Network
Work network
Access type: Internet
Connections: Local Area Connection
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
Connect to a network
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
Choose homegroup and sharing options
Access files and printers located on other network computers, or change sharing settings.
See also
HomeGroup
Internet Options
Windows Firewall

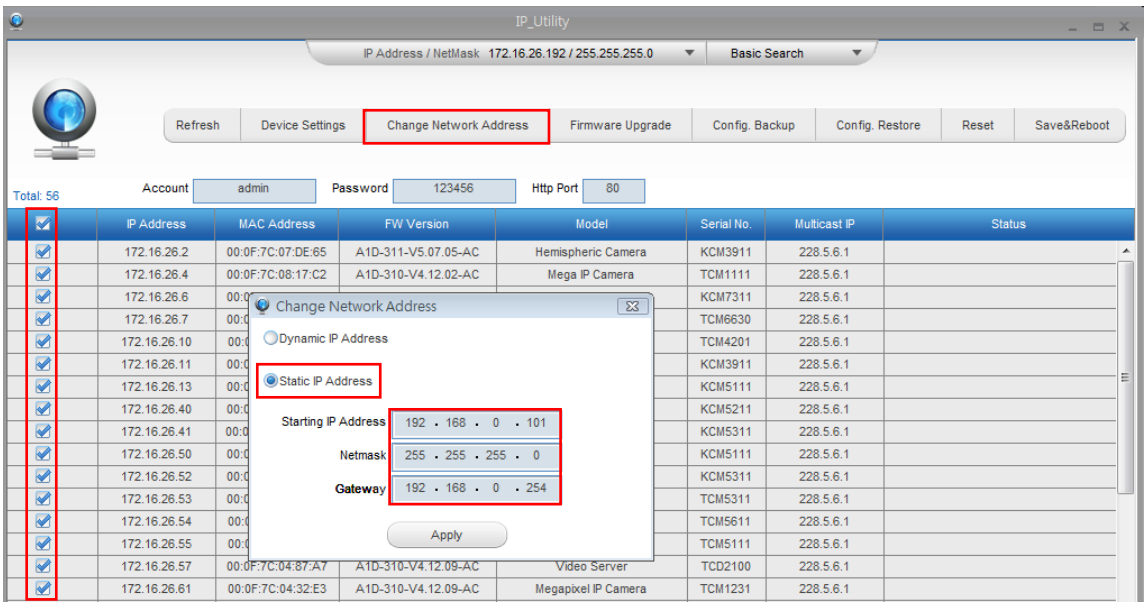





4
otocol Version 4 (TCP/IPv4) Properties
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 99
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel

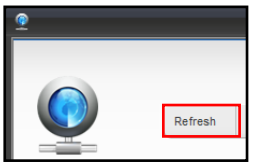
Manually adjust the IP addresses of multiple cameras:

If there are more than 1 camera to be used in the same local area network and there is no DHCP server to assign unique IP addresses to each of them, all of the cameras would then have the initial IP address of **192.168.0.100**, which is not a proper situation for network devices – all the IP addresses have to be different from each other. The easiest way to assign cameras the IP addresses is by using **IP Utility**:



With the procedure shown above, all the cameras will have unique IP addresses, starting from 192.168.0.101. In case there are 20 cameras selected, the last one of the cameras would have the IP 192.168.0.120.

Later, by pressing the “Refresh” button of the IP Utility, you will be able to see the list of cameras with their new IP addresses.



Please note that it is also possible to change the IP addresses manually by using the Web browser. In such case, please plug in only one camera at a time, and change its IP address by using the Web browser before plugging in the next one. This way, the Web browser will not be confused about two devices having the same IP address at the same time.

Access the Camera

Now that the camera and the PC are both having their unique IP addresses and are under the same network segment, it is possible to use the Web browser of the PC to access the camera.

You can use **any of the browsers** to access the camera, however, the full functionality is provided only for **Microsoft Internet Explorer**.

The browser functionality comparison:

Functionality	Internet Explorer	Other browsers
Live Video	Yes	Yes*
Live Video Area Resizable	Yes	No
PTZ Control	Yes	Yes
Capture the snapshot	Yes	Yes
Video overlay based configuration (Motion Detection regions, Privacy Mask regions)	Yes	No
All the other configurations	Yes	Yes

* When using non-Internet Explorer browsers, free third-party software plug-ins must be installed to the PC first to be able to get the live video feed from the camera. Check the firmware version of the camera to determine which plug-in is necessary:

Firwmware Version	Required Plug-In
A1D-500-V6.**04**.xx-AC or older	Basic VLC Media Player (http://www.videolan.org)
A1D-500-V6.**05**.xx-AC or newer	QuickTime (http://www.apple.com/quicktime/download/)

The camera firmware version can be found on the **FW Version** column of the IP utility or access the **Setup** page of the Web Configurator (see page 35).

Disclaimer Notice: The camera manufacturer does not guarantee the compatibility of its cameras with VLC player or QuickTime – since these are third party softwares. The third parties have the right to modify their utility any time which might affect the compatibility. In such cases, please use Internet Explorer browser instead.

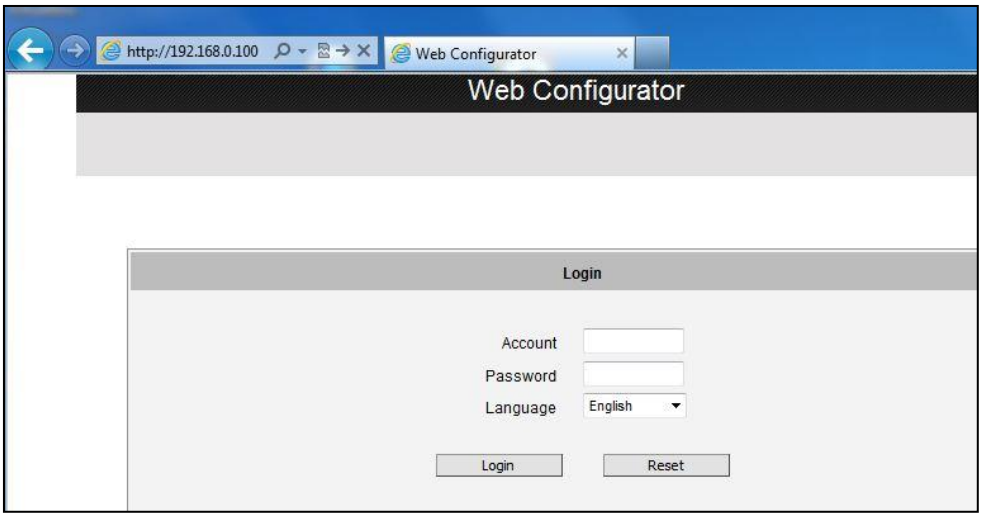
When using Internet Explorer browser, the ActiveX control for video stream management will be downloaded from the camera directly – the user just has to accept the use of such control when prompted so. No other third party utilities are required to be installed in such case.

The following examples in this manual are based on Internet Explorer browser in order to cover all functions of the camera.

Assuming that the camera's IP address is **192.168.0.100**, you can access it by opening the Web browser and typing the following address into Web browser's address bar:

http://192.168.0.100

Upon successful connection to the camera, the user interface called **Web Configurator** would appear together with the login page. The HTTP port number was not added behind the IP address since the default HTTP port of the camera is 80, which can be omitted from the address for convenience.

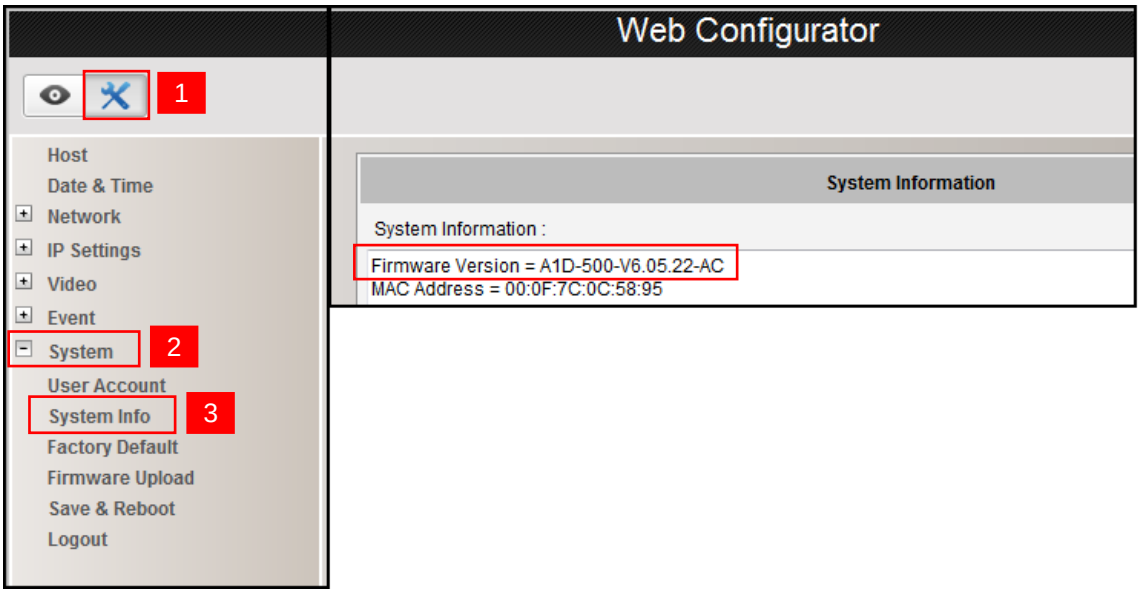


Before logging in, you need to know the factory default Account and Password of the camera.

Account: **Admin**

Password: **123456**

To check the firmware version through the Web Configurator, access the **Setup** page and click **System** > **System Info**.



For further operations, please refer to the **Firmware User Manual** downloadable from the website (**www.acti.com**).

How to Adjust Focus

This section describes the procedures in adjusting the viewing angle and focus of the different camera models under the Bullet with Bundled Removable Bracket series.

D3x / E3x Series

1. Remove the front cover ring.

D3x Series

E3x Series

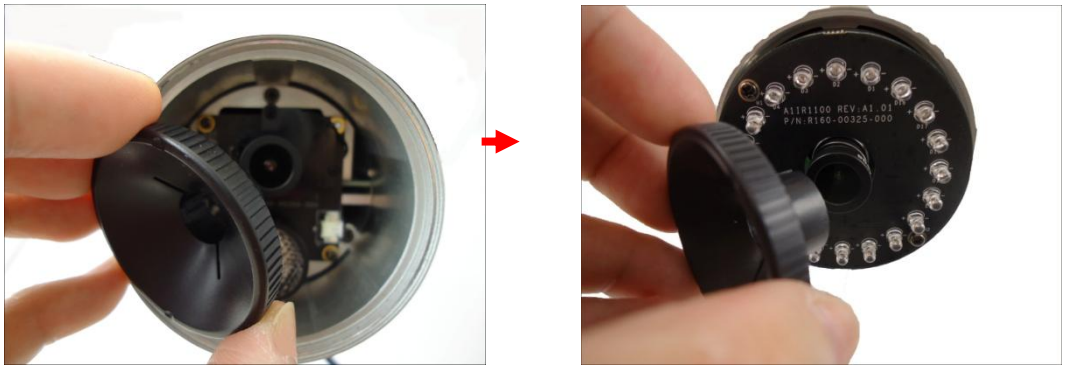
2. Remove the front cover (for D3x series only).

   The D3x camera models have three (3) designs. Check your camera design to know the suitable step in removing the front cover.

Design #1 Plain Front Cover	Design #2 Front Cover with Sticker	Design #3 Front Cover with Tabs
Detach the front cover using an adhesive tape or a suction cup (not included in the package).	Pull the plastic tab to detach the front cover.	Using pliers, pull by the tabs to detach the front cover.

NOTE: For D3x cameras with Design #2, remove the whole sticker from the front cover after adjusting the focus. The sticker cannot be reattached to the front cover. If the focus needs to be adjusted in the future, use a suction cup or adhesive tape to detach the front cover.

3. Attach the lens focus tuner to the lens.



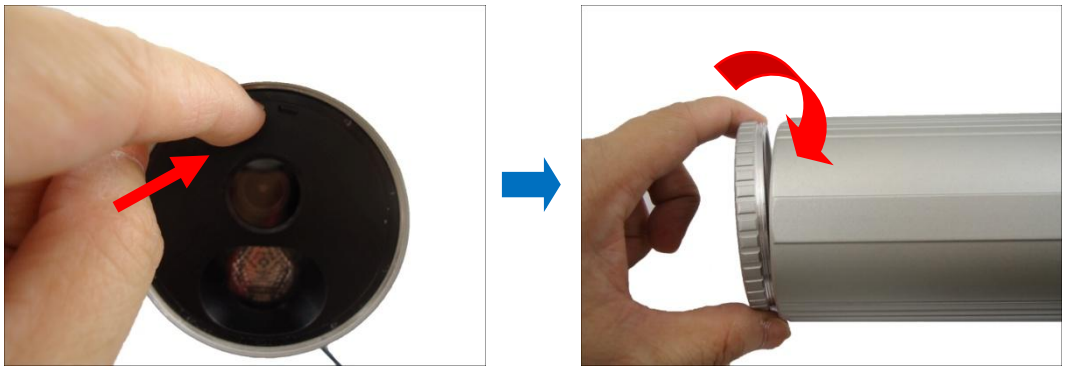
D3x Series E3x Series

4. Adjust the focus based on the live view of the camera (see ***How to Access the Camera*** Live View on page 28 to view the camera).

5. After adjusting the focus, remove the focus lens tuner.

6. Attach the front cover.

   For D3x series, attach the front cover and the front cover ring.

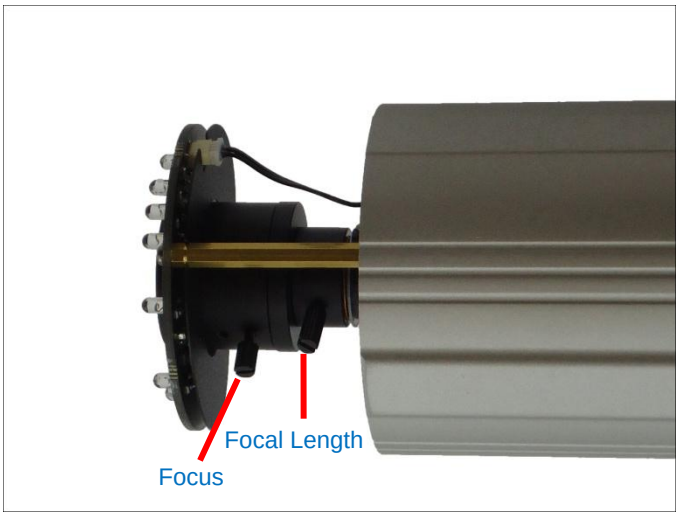


CAUTION: The front cover and front cover ring must be tightly closed to ensure water or dust does not go through any opening.

D4x / E41 / E41A / E42 / E42A / E43 / E43A Series

1. Open the front cover.

2. Based on the live view from the camera, adjust the focal length and focus of the target area.



3. When done, close the front cover.

CAUTION: The front cover must be tightly closed to ensure water or dust does not go through any opening.

How to Attach the Sunshield

The use of sunshield is optional if the camera will be installed indoors. However, if the camera will be installed outdoors, attach the sunshield to protect the lens from all types of weather and lighting conditions.

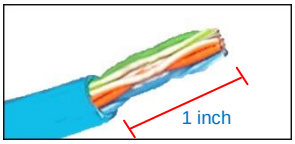
1. Attach the sunshield onto the screw nuts using the supplied screws and washers.

2. Slide to adjust the sunshield to cover the lens as far as possible but out of the camera's live view.

3. Tighten the screws to fix the position of the sunshield.

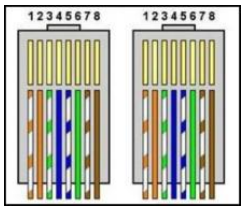
How to Make an Ethernet Cable

1. Prepare the following tools:
    - Ethernet cable without connectors
    - RJ-45 Connector (x2)
    - RJ45 Crimping Tool
    - Scissors
2. Cut about 1 inch into the plastic sheath from the end of the cable.

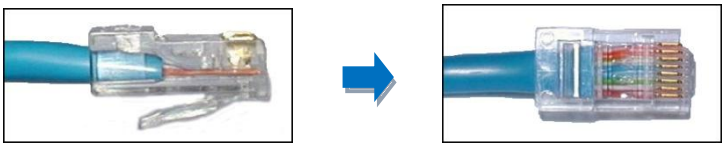


3. Unwind the wires and arrange them according to the color sequence below.

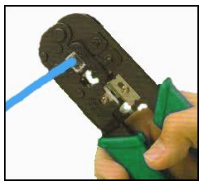
1) Stripe Orange
2) Orange
3) Stripe Green
4) Blue
5) Stripe Blue
6) Green
7) Stripe Brown
8) Brown



4. Pinch the wires between your fingers and straighten them out.
5. Use the scissors to make a straight cut across the wires ½ inch from the cut end.
6. With the RJ-45 connector tab facing down, push the wires into the connector all the way to the end.



7. Place the connector into the crimping tool, and cinch down to secure the RJ-45 connector to the Ethernet cable.



8. Repeat the same procedures to attach the other end.

Safety Information

Read these instructions

You should read all the safety and operating instructions before using this product.

Heed all warnings

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

Trademarks

All names used in this manual are probably registered trademarks of respective companies.

Liability

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Do not use accessories not recommended by the manufacturer

Only install this device in a dry place protected from weather

Servicing

Do not attempt to service this video product yourself. Refer all servicing to qualified service personnel.

Damage Requiring service

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

1) When the power-supply cord or plug is damaged
2) If liquid has been spilled, or objects have fallen into the video product.
3) If the inner parts of video product have been directly exposed to rain or water.
4) If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage, and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine if the video product is in proper operating condition.